FIG. 1

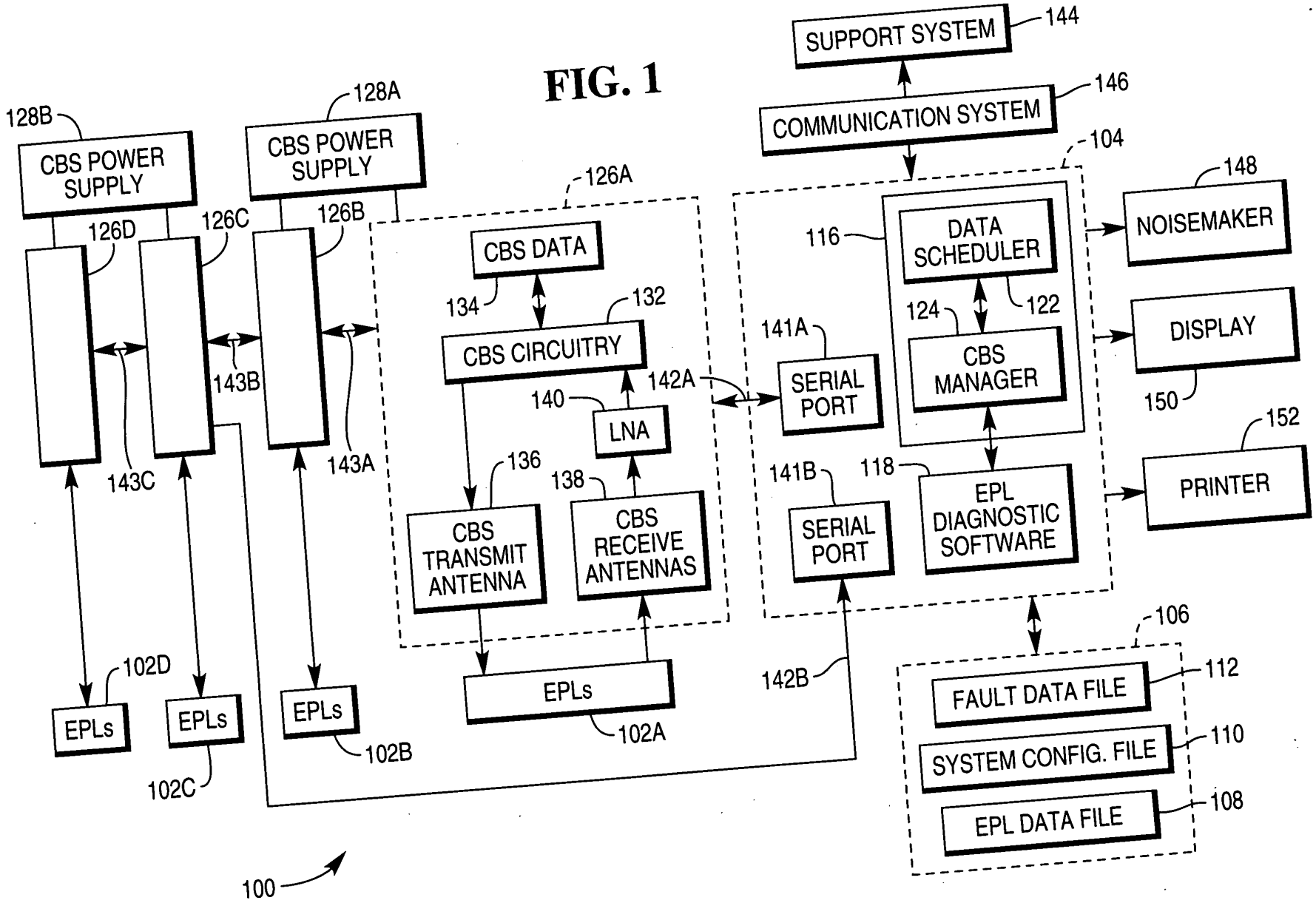

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FIG. 2

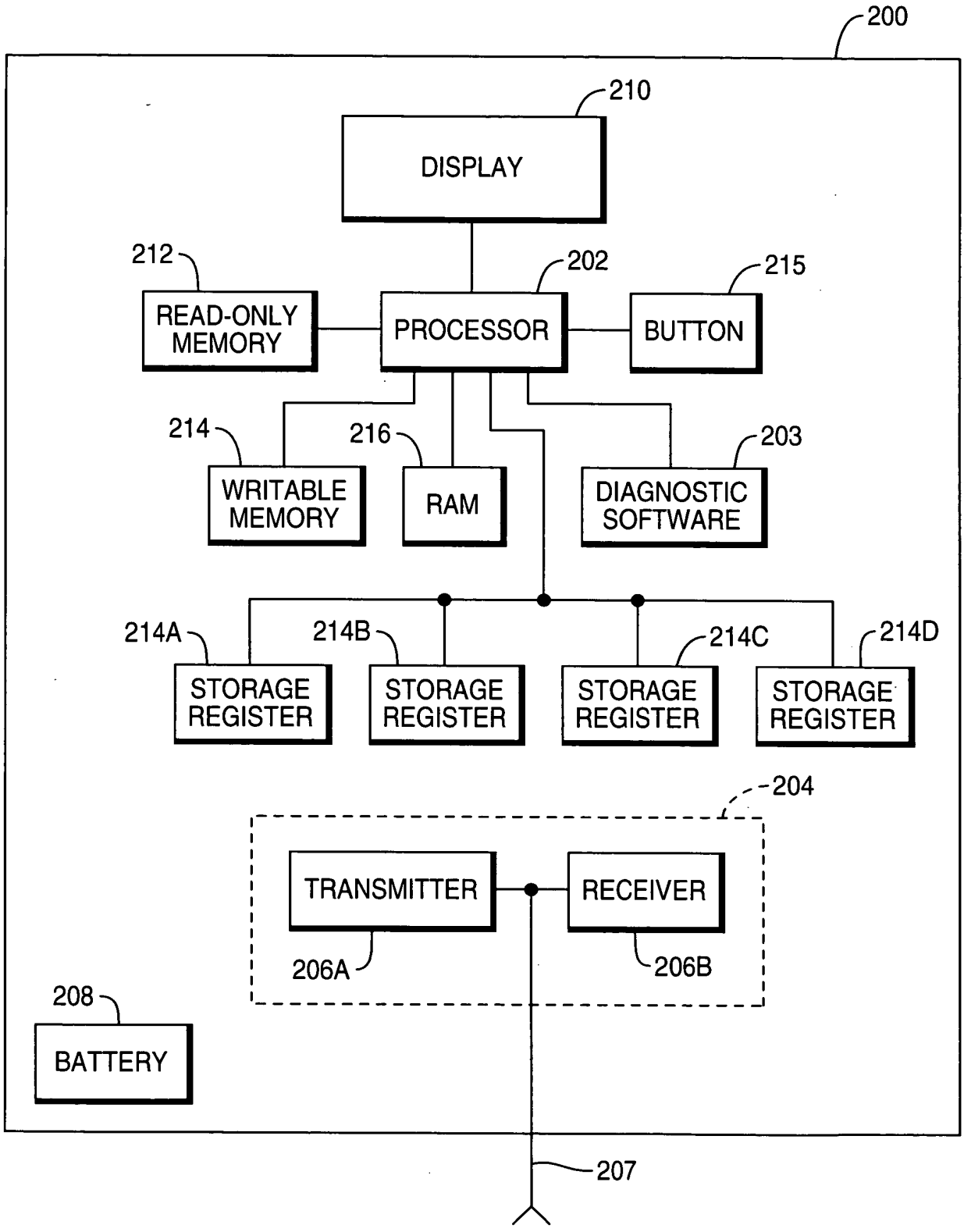

200
210
DISPLAY
212
READ-ONLY MEMORY
202
PROCESSOR
215
BUTTON
214
WRITABLE MEMORY
216
RAM
203
DIAGNOSTIC SOFTWARE
214A
STORAGE REGISTER
214B
STORAGE REGISTER
214C
STORAGE REGISTER
214D
STORAGE REGISTER
204
TRANSMITTER
RECEIVER
206A
206B
208
BATTERY
207

FIG. 3

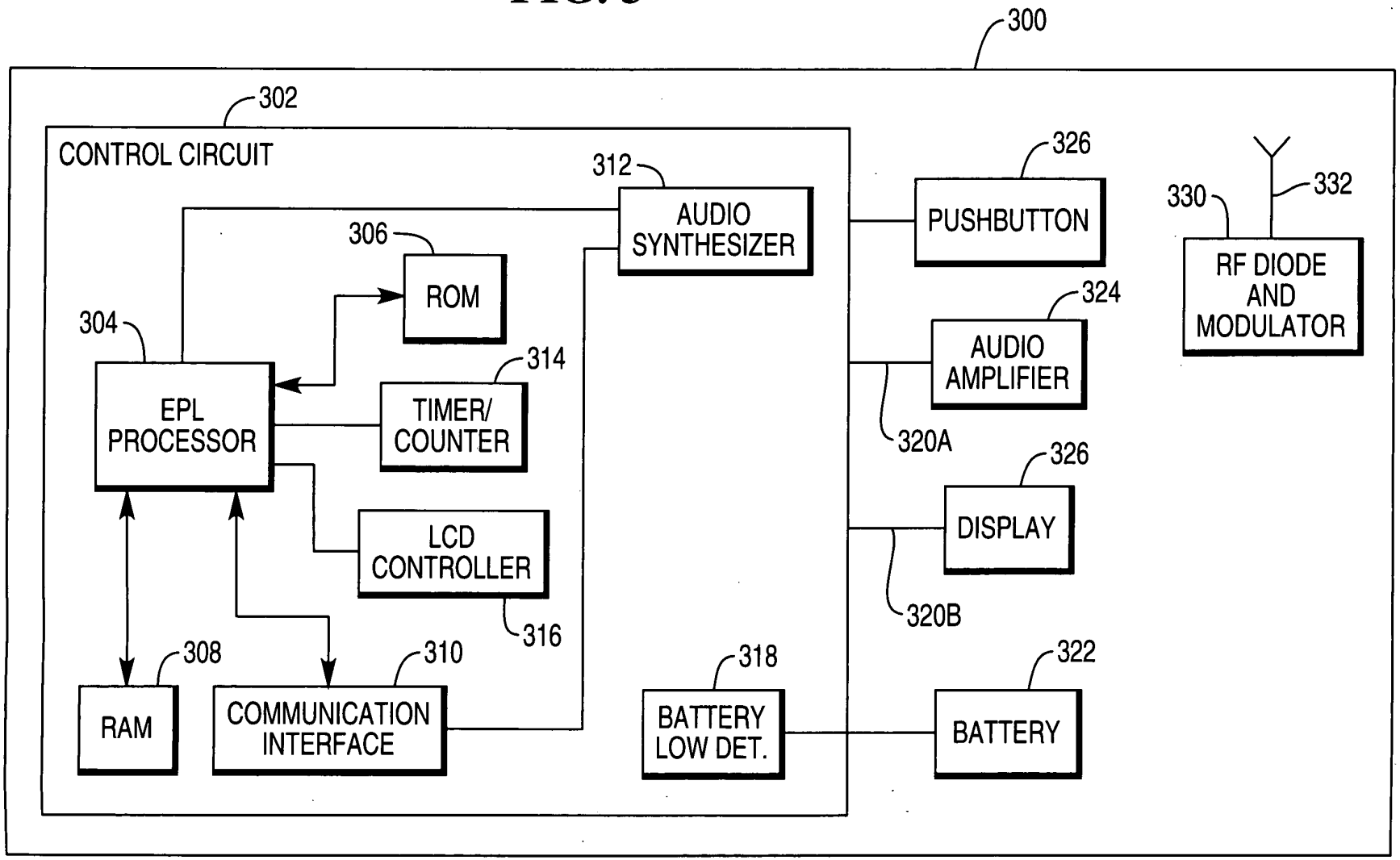
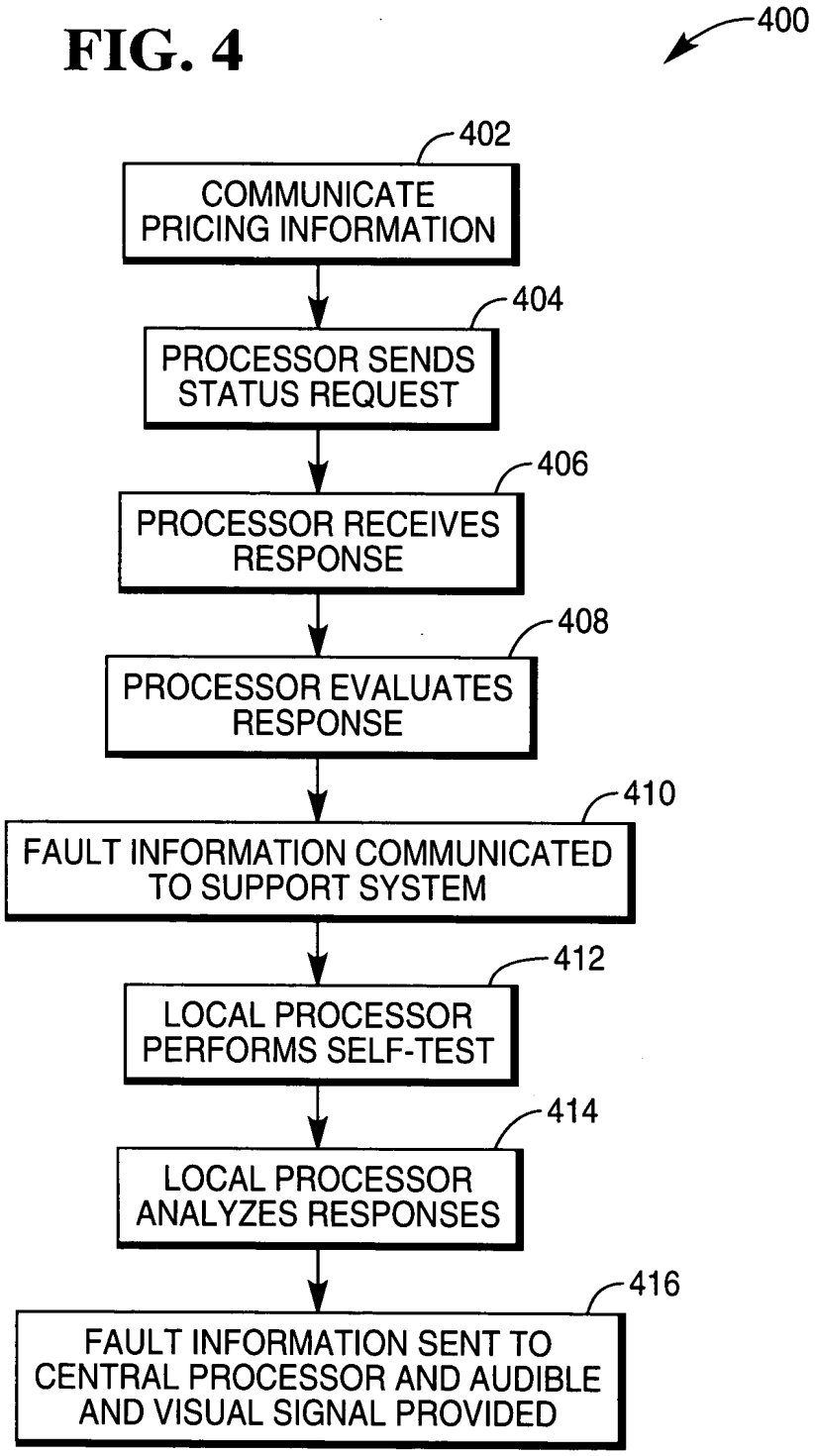

300
302
CONTROL CIRCUIT
312
AUDIO SYNTHESIZER
306
ROM
304
EPL PROCESSOR
314
TIMER/ COUNTER
LCD CONTROLLER
316
308
RAM
310
COMMUNICATION INTERFACE
318
BATTERY LOW DET.
326
PUSHBUTTON
324
AUDIO AMPLIFIER
320A
326
DISPLAY
320B
322
BATTERY
330
332
RF DIODE AND MODULATOR

FIG. 4


400
402
COMMUNICATE PRICING INFORMATION
404
PROCESSOR SENDS STATUS REQUEST
406
PROCESSOR RECEIVES RESPONSE
408
PROCESSOR EVALUATES RESPONSE
410
FAULT INFORMATION COMMUNICATED TO SUPPORT SYSTEM
412
LOCAL PROCESSOR PERFORMS SELF-TEST
414
LOCAL PROCESSOR ANALYZES RESPONSES
416
FAULT INFORMATION SENT TO CENTRAL PROCESSOR AND AUDIBLE AND VISUAL SIGNAL PROVIDED

500

FIG. 5

	Test	Purpose	Method
502	Battery level test	Test battery voltage	Query battery low detector
504	Stuck button test	Test pushbutton	Check for rapid change in register selected for display
506	Checksum test	Test displayed price and/or information	Compare display price with checksum
508	LCD glass test	Test display glass	Query circuitry for LCD status
510	Circuitry test	Test EPL circuitry	Query EPL circuitry and obtain return signal

600

FIG. 6

	Monitored Fault	Monitoring Action	Reported Recommendation
602	EPL battery voltage low	Perform EPL battery level test	Replace battery or EPL if level is too low
604	Pushbutton stuck	Perform stuck button test	Attempt to free stuck pushbutton and replace EPL if this fails
606	Incorrect data displayed	Perform checksum test	Retransmit data and replace EPL if this fails to correct the fault
608	EPL display faulty	Perform EPL LCD glass test	Replace EPL
610	EPL circuitry faulty	Perform EPL circuitry test	Replace EPL